

ZHANG, Hongbao

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Education

- Major in Data Science, The Chinese University of Hong Kong, Shenzhen** **Shenzhen**
Master of Science in Data Science Sep 2023 – Jun 2025 (Expected)
- **GPA:** 3.71 / 4.
 - **Relevant Courses:** *Natural Language Processing, Computer Vision, AI Security and Privacy, Reinforcement Learning.*
- Major in Finance, Xiamen University.** **Xiamen**
Bachelor in Economics Sep 2019 – Jun 2023
- **GPA:** 3.63 / 4.
 - **Honors:** XMU Academic Excellent Student Scholarship (Top 5%, 2023); XMU Anniversary Sportsmanship Scholarship (2022).
 - **Relevant Courses:** *Econometrics, Microeconomics, Macroeconomics, Accounting, Corporate Finance, Python, Statistics.*
- BSc Exchange, The University of Hong Kong** **Hong Kong SAR**
Department of Statistics and Actuarial Science, Faculty of Science Jan 2022 – May 2022
- **Honors:** *Fung Scholarship.*
 - **Relevant Courses:** *Advanced Statistical Modelling, Multivariate Data Analysis, Machine Learning, Financial Calculus.*

Research Experience

- Secure Computing Lab of Big Data (SCLBD)** **Shenzhen**
Working as Research Assistant (Supervised by Prof. Baoyuan WU, CUHK(SZ)). May 2024 – Present
- Co-authored on two papers submitted to two CCF-A conferences respectively. The first one is *HMGIE* (<https://arxiv.org/pdf/2412.05685>), which presents a novel framework for detecting and evaluating data inconsistencies across multiple granularities in vision-language datasets. Another is *BoT* (<https://arxiv.org/pdf/2502.12202>), a novel backdoor attack designed to selectively disrupt reasoning processes of o1-like models, forcing to generate outputs without any reasoning steps.
 - Contributing to a submission on detecting dirty samples in training data for vision-language models by a versatile VQA cleanser.
- Adaptive Parameter Tuning of Evolutionary Computation Algorithms** **Shenzhen**
Working as Research Assistant (Supervised by Prof. Ka Wai TSANG, CUHK(SZ)). Jul 2023 – Present
- Responsible for the implementation and simulation of the proposed Adaptive Parameter Tuning algorithm. (The paper is a continued work from an unfinished paper from Prof. Tze Leung LAI, former COPSS Presidents' Award statistician.)
 - Finished all coding and experiments in the paper, which has been accepted to *Statistics in Biosciences* and will be released soon.
- Analyzing Underlying Sentiment Discrepancies: Executives vs. AI in Earnings Calls** **Shenzhen**
Capstone Project (Supervised by Prof. Rui SHEN, CUHK(SZ)). Sep 2023 – May 2024
- Developed the *Human-AI Sentiment Discrepancy Index (HASDI)* to analyze sentiment discrepancies between corporate executives and LLMs and underscore the correlation between the index and company's financial and stock performances.
 - Processed conference transcripts, called API setting LLMs and applied NLP to extract sentiment signals for financial analysis.
- Research on Quantitative Investment Strategy of ETFs based on Ensemble Learning of Technical Indicators** **Xiamen**
Graduation Thesis (Supervised by Prof. Chen Haiqiang, Xiamen University, *Highest Distinction*). Dec 2022 – May 2023
- Utilized Ensemble Learning to train models on 50+ manually calculated ETF technical indicators, creating portfolios based on predicted rising probabilities and comparing performance across return and risk metrics. Implemented dimension reduction, cross-validation, and back-testing across ETF pools of varying market values and industries to evaluate and refine strategies.

Project Experience

- Decision-based Black-box Adversarial Attack Using PSO Optimization** Jan 2024 – May 2024
- Introduced AdvPSO, a PSO-based method for crafting effective adversarial examples in black-box adversarial attack settings
- MULTIMODAL GENSHIN, LAUNCHED!** Jan 2024 – May 2024
- An AI system integrating an ORPO aligned LLM, RAG, and a finetuned Stable Diffusion to help Genshin Impact players.

Working Experience

- Daily Intern, Electricity and New Energy Group, ZHESHANG SECURITIES** May 2022 – Sep 2022
- Conducted financial research on electricity and new energy industries, including authoring 3 industry research reports.
- Department of Financial Engineering, Daily Intern, CHINA EVERWIN ASSET** Jun 2021 – Aug 2021
- Assisted in developing a long-term quantitative fund evaluation model using Python-processed 30 factors and model training.

Other Information

- **Language skills:** Chinese (native), English (fluent). IELTS: 7.5/9.0 (2020); GMAT: 680 (2021).
- **Computer skills:** Proficient in Python, MS office and R. Intermediate user of STATA, SPSS, SAS and Matlab.
- **Extracurricular Awards:** Contemporary Undergraduate Mathematical Contest in Modeling (First Honor in Fujian Province); Mathematical Contest in Modeling (Successful Participation); Innovation and Entrepreneurship Training Program for College Students (National Project); Xiamen Universities Football League Tournament (Champion);